

Updated Budget

Mini-Solar Power Station

SD1203

11/8/2012

Group: Brian Amann
Stephanie Erickson
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Kaixun (Jerry) Wang

Advisors: Dr. Yuvarajan
Jeff Erickson

Updated Budget

	Project Name:	Mini-Solar Power Station					
	Project Number:	SD1203					
Sun Simulator							
Mechanical Hardware	Cost/Unit	#	Purchased	Total Cost	Supplier	Notes	
3/8" x 10' Steel Pipe	\$21.10	2	X	\$42.20	Tubes & Hose of ND	Part #: 03735	
Wood (2x10-10' (1),2x4-8' (2))	\$15.07	1	X	\$15.07	Menards		
4 in Heavy Duty Tee Hinge	\$3.87	2	X	\$7.74	Grainger Industrial Supply	Part#: 1RCT3	
R40 5" Dia., 250W, 120V Lamp	\$21.84	1	X	\$21.84	Grainger Industrial Supply	Part#: 1E295	
Heat Lamp Dome	\$18.00	1	X	\$0.00	Free from NDSU		
Linear Actuator	\$299.00	1	X	\$0.00	Free from NDSU	LA34AGKS-4	
Stepper Motor	\$14.95	1	X	\$0.00	Free from NDSU	57BYGH213	
Ball Bearing Sheave	\$11.91	2	X	\$23.82	Grainger Industrial Supply	Part#: 5RTD5	
Flat Mount Block Pulley, 2"	\$7.73	2	X	\$15.46	Grainger Industrial Supply	Part#: 4JX69	
1/16, 50ft, 7x19 steel cable	\$39.80	1	X	\$39.80	Grainger Industrial Supply	Part#: 2TAY9	
Solid State Relay	\$30.00	1	X	\$0.00	Free from NDSU		
Gear Box for stepper motor	\$100.00	1	X	\$0.00	Free from NDSU	Jeff Constructed	
PCB	\$50.00	2	X	\$100.00	Advanced Circuits	Brian's & Jace's	
Satellite Tracking System							
Mechanical Hardware							
Satellite Dish	\$50.00	1	X	\$0.00	Provided by Brian		
Stepper Motor	\$14.95	1	X	\$14.95	Free from NDSU		
Mylar	\$11.99	1	X	\$11.99	www.amazon.com	Part#: VMY130	
DC Motor		1	X				
10' Copper Coil 3/8" OD	\$8.74	1	X	\$8.74	Menards	Item #: 675142	
Brass Hose Barb	\$1.99	4	X	\$7.96	Menards	Model 17090298	
Tetra Statuary Pump	\$24.94	1	X	\$24.94	Menards		
Tube to MPT connector	\$2.67	4	X	\$10.68	Menards	Model 17000122	
PVC Insulation	\$2.35	2	X	\$4.78	Menards	Item #: 2KUE2	
10' Plastic Tubing 3/8"	\$8.49	1	X	\$8.49	Menards		
12V rechargeable battery	\$30.00	3	X	\$90.00	Free from NDSU		
NI USB 6008 DAQ	\$169.00	1	X	\$0.00	Free from NDSU		
Plastic Circuit Enclosures	\$5.00	2	X	\$20.00	Radio Shack		
350W Inverter	\$29.00	1	X	\$0.00	Provided by Brian	Walmart	
Electrical Components							
ZTX1053a (npn transistor)	\$0.98	20	X	\$0.00	Free from NDSU		
MCP602 (OPAMP)	\$0.62	16	X	\$0.00	Free from NDSU		
PIC18F4620 (Microcontroller)	\$7.92	5	X	\$0.00	Free from NDSU		
ECS-200-20-46X (20 MHz Crystal)	\$0.46	5	X	\$0.00	Free from NDSU		
Photocell 80k-240kΩ	\$1.86	15	X	\$0.00	Free from NDSU		
LM7805 (5V voltage regulator)	\$0.61	5	X	\$0.00	Free from NDSU		
LM7812ACT (12V voltage regulator)	\$0.69	2	X	\$0.00	Free from NDSU		
Estimated Actual Cost of Project	\$1,005.53			\$468.46			

Note: "Cost/Unit" is the "true value" of the item.

Note: "Total Cost" is the "acquired cost" of the item. For items with a "Total Cost" of \$0.00 please refer to the "Supplier" column for supplier.

Note: # indicates the quantity of the item for each item in row or column.

Note: An X in the "Purchased" column indicates the item was ordered and received.

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Approval and Sign off:

Dr. Yuvarajan: _____ Date: _____

Jeff Erickson: _____ Date: _____

Brian Amann: _____ Date: _____

Stephanie Erickson: _____ Date: _____

Qingyu Meng: _____ Date: _____

Kaixun Wang: _____ Date: _____